

February 20, 2002

MEMORANDUM

SUBJECT: Review of Scientific Bases of Foam Supplies, Inc. Petition for Methyl Formate

FROM: Basil Dimitriades, SEE Grantee (MD-80)

TO: G.T.Helms, Jr., Leader (MD-15)
OAQPS/Ozone Policy and Strategies Group

I have reviewed the scientific bases of the petition by Foam Supplies, Inc. that the methyl formate (HCOOCH_3) be added to EPA's list of "Volatile Organic Compounds (VOC) of Negligible Photochemical Reactivity that Should be Exempt from Regulation under State Implementation Plans."

Existing evidence on the subject consists of peer-review literature data on k_{OH} (rate constant for reaction with OH radicals) and MIR (Maximum Incremental Reactivity) for methyl formate and ethane. Such data are both relevant and appropriate since EPA has been receptive to both types of data as reactivity-related evidence, and ethane has been used by EPA as the "borderline-species" separating "reactive" from "negligibly reactive" organics.

The k_{OH} data indicate the methyl formate reactivity to be 2.4 to 3.1 times less reactive than that of ethane on an either per-mole or per-gram basis. Based on the MIR data, the methyl formate is less reactive than ethane by a factor of 5 on a per-gram basis, and by a factor of 2.5 on a per-mole basis.

In the light of the above, I concluded that the methyl formate is less reactive than ethane and, therefore, a "negligible reactivity" rating is justified.

cc: D.Luecken
J.Blancato
B.Gay